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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/782,971	02/23/2004	Mineyoshi Masuda	NITT.0195	7715

7590 05/27/2009  
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EXAMINER
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PHAN, TUANKHANH D

ART UNIT	PAPER NUMBER
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2163

MAIL DATE	DELIVERY MODE
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05/27/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/782,971	<b>Applicant(s)</b> MASUDA ET AL.	
	<b>Examiner</b> TUAN-KHANH PHAN	<b>Art Unit</b> 2163	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 February 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14, 16 and 24-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14, 16 and 24-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Amendment***

The Amendment, filed on 2/27/2009, has been entered and acknowledged by the Examiner. Claims 1-14, 16 and 24-29 are pending.

### ***Response to Arguments***

Applicant's arguments, filed 02/27/2009, with respect to claims 1-14, 16 and 24-29 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-14, 16 and 24-29 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. Claims 1, 12 and 27 recite determining where a cache hit rate for a cache memory in the newly added server is beyond a predetermined value based upon the monitored performance; increasing an amount of requests to be allocated to the newly added server if the cache hit rate is beyond the predetermined value". The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

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Claims 2-13, 14, 16, 24-26 and 28-29 are also rejected as dependents of the rejected claims.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-14, 16 and 24-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chellis et al. (US Pat. 6,901,446), hereinafter Chellis, in view of Gerszberg et al. (US Pat. 6,385,693).

Regarding claim 1, Chellis teaches a load distribution method adapted-by a client-server system including a plurality of clients, a server cluster and a storage device which is coupled to said servers cluster and stores data to be used by at least one of the clients, said server cluster including a plurality of servers each of which includes a cache memory, and said server cluster being used for processing requests related to the data in the storage device from said clients and allowing a number of said servers to be changed dynamically, comprising the steps of: (i.e. **a new server may come online and dynamically allocating resource provided**, col. 5, lines 20-49):

detecting, by one of clients, a change of the number of servers forming said server cluster (i.e. **resource instance table for the availability of the new resources**, col. 5, lines 25-30);

setting, by said one client, an allocation of requests transmissible out to a newly added server at an initial amount smaller than amount set for the remaining servers in the server cluster, right after detecting an increase in the number of servers (col. 9, line 9; col. 5, lines 40-46); and

monitoring performance of the newly added server (col. 5, lines 65-67; discover available resource/performance of the new server);

determining whether a memory in the newly added server is beyond a predetermined value based upon the monitored performance (col. 6, lines 3-7; available resources for requests);

increasing an amount of requests to be allocated to the newly added server if the memory is beyond the predetermined value (col. 6, lines 5-10; i.e. such availability of new resource is or course more than the current occupied servers);

transmitting out requests to said servers on the basis of said set allocation, if said increase in the number of server is detected; and (col. 5, lines 40-46; col. 9, line 9) receiving, by said one client, responses to the request from said servers (col. 9, line 9). While a memory could be a cache hit rate memory, Chellis does not explicitly a cache hit rate memory of a server. However, in the same field of load distribution added server, Gerszberg et al. disclose server includes cache hit rate to address reallocation of server traffic and load distribution (col. 10, lines 43-61). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the cache hit rate

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and utilization taught by Gerszberg et al. into the server load distribution taught by Chellis to automatically and dynamically maintain a fast and efficient network performance for all servers (Gerszberg et al., col. 10, lines 50-52)

Regarding claim 2, Chellis teaches a load distribution method according to claim 1, further comprising a step of increasing, by said one client, said amount of allocation of request transmissible out to said newly added server with the lapse of time (i.e. **resource value allocation is changing over a time period**, col. 7, lines 25-30).

Regarding claim 3, Chellis a load distribution method according to claim 1, wherein said detection of an increase in said number of said servers is used as a trigger of each of said clients to set said allocation of requests transmissible out to said newly added server at said amount smaller than said amount set for each of said remaining servers (e.g. **the excessive 45-client is smaller than the capacity 100 of the new server**; col. 5, lines 36-45; col. 8, lines 38-45; col. 9, line 9).

Regarding claim 4, Chellis teaches a load distribution method according to claim 1, further comprising the steps of: acquiring, by said one client, information on a performance of said newly added server, if said newly added server is detected; and setting, by said one client, said allocation of requests transmissible out to said newly added server on the basis of said acquired information (col. 11, lines 20-25; col. 19, lines 38-47).

Regarding claim 5, Chellis teaches a load distribution method according to claim 1, wherein the step of monitoring performs acquiring performance information of said

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newly added server (i.e. **allocation status and the availability of a resource is based on the acquired state information**, col. 4, lines 15-23).

Regarding claims 6, Chellis teaches a load distribution method according to claim 5, wherein said information on a state of said newly added server and said amounts of allocation of requests set for the servers wherein Gerszberg et al. disclose server includes cache hit rate to address reallocation of server traffic and load distribution (col. 10, lines 43-61).

Regarding claim 7, Chellis teaches a load distribution method according to claim 1 wherein: said client-server system has a management server for managing the number of servers composing said server cluster (col. 10, lines 5-12); and a notice received from said management server as a notice of an increase in said number of said servers is used as a trigger of each of said clients to set said allocation of requests transmissible out to said newly added server at said amount smaller than said amount set for said remaining servers (col. 10, lines 5-12; col. 9, line 9).

Regarding claim 8, Chellis teaches a load distribution method according to claim 1, wherein: said client-server system has a management server, and the method further comprising the steps of:

acquiring, by said one client, information on a performance of each of said servers (col. 11, lines 20-25; col. 19, lines 38-47);

setting, by said one client, said allocation of requests transmissible out to said newly added server on the basis of said acquired information (col. 5, lines 40-46).

Regarding claim 9, Chellis teaches a load distribution method according to claim 1, further comprising a step of: setting, by said one client, said allocation of requests transmissible out to said newly added server by setting the number of connections for communications with said servers (col. 21, lines 15-25).

Regarding claim 10, Chellis teaches a load distribution method according to claim 1, further comprising a step of: setting, by said one client, an allocation of requests transmissible out to each of said servers by changing quotas each set for every individual one of said servers (col. 3, lines 35-45) as an allotment of requests transmissible out to said individual server (col. 3, lines 43-49).

Regarding claim 11, Chellis teaches a load distribution method according to claim 10, further comprising the steps of: holding, by said servers, directory information indicating storage locations of files stored in said storage apparatus (col. 13, lines 50-59); and setting, by said one client, said allocation of requests transmissible out to each of said servers by changing quotas each provided for every individual one of said servers as an allotment of said directory information stored in said individual server where said allotment of said directory information storable in said individual server represents an allotment of requests transmissible out to said individual server (i.e. resource tree, col. 13, lines 45-62).

Regarding claims 12 and 27, see the discussions of the claim 1 above.

Regarding claim 13, Chellis teaches a client-server system according to claim 12 wherein: each of said clients has an allotment-holding unit for holding an allotment set for every individual one of said servers (i.e. **allotment indication of 10 users per**



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**server is given as an example**, col. 5, lines 30-40) as an allotment of requests transmissible out to said individual server; and said allocation setting unit sets an allocation of requests transmissible out to each of said servers by changing quotas each set for every individual one of said servers as said allotment of requests transmissible out to said individual server (col. 5, lines 30-40).

Regarding claim 14, Chellis teaches a client-server system according to claim 13, further comprising storage apparatus connected to said servers wherein: each of said servers is provided with a directory- information-holding unit for holding directory information indicating storage locations of files stored in said storage apparatus (col. 13, lines 50-59); said clients are provided with a management server for holding quotas each provided for every individual one of said servers as an allotment of said directory information storable in said individual server (col. 13, lines 50-59); and said allocation setting unit sets said allocation of requests transmissible out to each of said servers by changing said quotas each provided for every individual one of said servers as an allotment of said directory information stored in said individual server (col. 5, lines 40-46).

Regarding claim 24, Chellis a client-server system according to claim 12, further comprising a management server for managing the number of servers: wherein the clients receives a notice of an increase in said number of said servers is used as a trigger of each of said clients to set said allocation of requests transmissible out to said newly added server at said amount smaller than amount set for the remaining servers (col. 21, lines 15-25; col. 9, line 9).

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Regarding claim 25, see the discussion of claim 4 above.

Regarding claims 26 and 29, see the discussion of claim 6 above.

Regarding claim 28, see the discussion of claim 2 above.

Regarding claim 16, Chellis teaches a load distribution method according to claim 2 (see the discussion of the claim 2 above), wherein each of said clients sets said allocation of requests transmissible out to said newly added server by setting the number of connections for communications with said servers (i.e. **indication of 10 connections per server is given as an example**, col. 5, lines 30-40).

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to TUAN-KHANH PHAN whose telephone number is (571)270-3047. The examiner can normally be reached on 4/5/9.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TKP  
/Hung T Vy/  
Primary Examiner, Art Unit 2163